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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/774,637	02/01/2001	Koichiro Tanaka	740756-2256	3042

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EXAMINER

DIAZ, JOSE R

ART UNIT	PAPER NUMBER
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2815

DATE MAILED: 01/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/774,637

Applicant(s)

TANAKA, KOICHIRO

Examiner

José R Díaz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 42-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 42-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3, 5, 7, 9-11, 13-14, 42, 44-46, 48-50, 52 and 53 are rejected under 35 U.S.C. 102(b) as being anticipated by Pressley (US Pat. No. 4,475,027).

Regarding claims 1 and 42, Pressley teaches a beam homogenizer comprising a laser oscillator (a-b) (see fig. 1), and two reflectors (10a, 10b) (see fig. 3) for reflecting and splitting the laser beam (see fig. 1 and abstract).

Regarding claims 3, 7, and 46, Pressley teaches a beam homogenizer comprising a laser oscillator (a-b) (see fig. 1), and two reflectors (10a, 10b) (see fig. 3) for reflecting and splitting the laser beam (see fig. 1 and abstract), each reflectors including a plurality of reflective surfaces (11) (see fig. 2), wherein the reflective surfaces (11a-11g) are formed on a parabolic surface of the homogenizer (10) (see fig. 1). Please note that "parabola" is defined as the path (locus) of a point moving so that it always the same distance from a fixed point (the focus) and a given line (the directrix)

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("Parabola." Encyclopaedia Britannica. 2003. Encyclopaedia Britannica Online. <http://www.search.eb.com/eb/article?eu=59822>). In the instance case, consider the parabolic surface of the homogenizer (10) as to be the locus and each reflective surface (11a-11g) as to be the point in the locus, wherein its distance from the focus is equal to its distance from the directrix.

Regarding claims 5, 11, 42 and 50, Pressley teaches a beam homogenizer comprising a laser oscillator (a-b) (see fig. 1), and two reflectors (10a, 10b) (see fig. 3) for reflecting and splitting the laser beam (see fig. 1 and abstract), each reflectors including a plurality of reflective surfaces (11) (see fig. 2), wherein the reflective surfaces (11a-11g) are formed on a parabolic surface of the homogenizer (10) (see fig. 1) having a plurality of plane mirrors (11) (see fig.2 and col. 4, lines 36-37) . Please note that "parabola" is defined as the path (locus) of a point moving so that it always the same distance from a fixed point (the focus) and a given line (the directrix) ("Parabola." Encyclopaedia Britannica. 2003. Encyclopaedia Britannica Online. <http://www.search.eb.com/eb/article?eu=59822>). In the instance case, consider the parabolic surface of the homogenizer (10) as to be the locus and each reflective surface (11a-11g) as to be the point in the locus, wherein its distance from the focus is equal to its distance from the directrix.

Regarding claims 9-10, 13-14, 44-45, 48-49, 52 and 53 Pressley teaches that the laser oscillator (a-b) is selected in the range from ultraviolet to infrared (see col. 2, lines 37-39).

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3. Claims 1 and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by Jung et al. (GB 2 270 196 A).

Regarding claims 1 and 42, Jung et al. teaches a beam homogenizer comprising a laser oscillator (see page 10, lines 23-29), and two reflectors (50, 52) (see fig. 2) for reflecting and splitting the laser beam (see abstract and page 6, lines 13-15).

4. Claims 1 and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by Ogura (US Pat. No. 5,440,423).

Regarding claims 1 and 42, Ogura teaches a beam homogenizer (17) comprising a laser oscillator (11) (see fig. 1), and two reflectors (consider the fact that the homogenizer 17 is comprised of a plurality of reflectors (21) (see fig. 2) for reflecting and splitting the laser beam (see fig. 2).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 4, 6, 8, 12, 43, 47 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pressley (US Pat. No. 4,475,027) in view of Yamazaki et al. (US Pat. No. 5,900,980).

Regarding claims 2, 4, 6, 8, 12, 43, 47 and 51, Pressley fails to teach that output of the laser beam has a length of 600 mm or more. Yamazaki et al. teaches a well-

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known relation between the number of cylindrical lenses in the homogenizer and the length of the laser beam, wherein by selecting the appropriate number of cylindrical lenses, the desired length can be obtained (see fig. 11). For example, it is required about 72 to 200 cylindrical lenses to obtain an output beam having a length of 1000 mm (see col. 8, lines 19-28).

Pressley and Yamazaki et al. are analogous art because they are from the same field of endeavor as applicant's invention. At the time of the invention it would have been obvious to a person of ordinary skill in the art to include an output laser beam having a length of 600 mm or more. The motivation for doing so, as is taught by Yamazaki et al., is improving homogeneity of the radiation energy density of the linear laser (abstract). Therefore, it would have been obvious to combine Yamazaki et al. with Pressley to obtain the invention of claims 2, 4, 6, 8, 12, 43, 47 and 51.

Response to Arguments

7. Applicant's arguments with respect to claims 1-14 and 42-53 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Unternahrer (US Pat. No. 6,021,154) discloses a reflective laser beam homogenizer (abstract).

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9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Correspondence

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to José R Díaz whose telephone number is (703) 308-6078 or (571) 272-1727, after February 9, 2004. The examiner can normally be reached on 9:00-5:00 Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (703) 308-2772. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7722.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

JRD


GEORGE ECKERT
PRIMARY EXAMINER